

**METHODS OF SCREENING TEST COMPOUNDS USING GADD34L,**  
**AN eIF2 $\alpha$ -SPECIFIC PHOSPHATASE SUBUNIT**

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**ABSTRACT**

The invention is directed to methods and reagents for identifying test substances useful for the prevention or treatment of diseases involving an oxidative stress. The methods involve screening assays, including high throughput screening techniques, in which the test substances 10 are tested for their ability to promote resistance to oxidative stress by inhibiting the activity of GADD34L, and thereby inhibiting the dephosphorylation of eIF2 $\alpha$ , while not causing stress.